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10/643,243

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Willem Antheunisse

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EXAMINER

HENDRICKS, KEITH D

ART UNIT

PAPER NUMBER

1761

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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**Office Action Summary**

Application No.

10/643,243

Applicant(s)

ANTHEUNISSE ET AL.

Examiner

Keith Hendricks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

Claims 9 and 16 remain objected to because of the following informalities: the terms “flavouring” and “colouring”. Applicant is requested to amend the claims to comply with accepted U.S. spelling and terminology. Appropriate correction is required.

### *Specification*

The amendment filed October 05, 2006, is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the amendment of the specification at pages 6, 10 and 11, for the recitation of the various components as “selected from the group consisting of”. The previous original recitation provided for various components to be “selected from the group comprising”, which was interpreted to be open language and encompassing other possible materials within the stated categories. The original language also may be interpreted to encompass the recited components within compositions comprising other materials; thus, the current amendment to close the language and thus the components, is viewed as new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

### *Claim Rejections - 35 USC § 112*

i) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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*NOTE: Applicant's amendment provides a general, lengthy listing of examples of points within the specification where the claim amendments supposedly find support. However, they do not specifically demonstrate how each specific claim amendment directly correlates to the alleged support in the specification. Applicant would be better served to specifically point out where each of the major claim amendments finds support within the specification, if said amendments were not adopted directly from an original claim. This may potentially avoid unnecessary new matter and inadequate written description rejections.*

Claims 1-10 lack proper support for the recitation of hydrogen peroxide as an activator (claim 1, part 'b'). Initially, it is noted that the specification does not specifically and distinctly state that H<sub>2</sub>O<sub>2</sub> is an activator useful in the disclosed invention. At best, at pages 5-6 of the specification it is stated that hydrogen peroxide is "essential to the activation of the oxidising [sic] system" (lines 4-8), and that peroxidases are "dependent upon hydrogen peroxide for catalysing [sic] oxidation reactions (lines 28-29), where "the peroxidases are essentially inactive as long as conditions are essentially hydrogen peroxide free." However, this does not and can not provide a direct conclusion that hydrogen peroxide *is an activator*. At best, it implies that H<sub>2</sub>O<sub>2</sub> is "essential to the activation", i.e. it may be a co-factor or smaller component of a larger, complete activator system. This is different from establishing that H<sub>2</sub>O<sub>2</sub> *is an* activator, which is not clearly stated in the specification.

Furthermore, the specification does not provide support for the recitation of claim 1 (part 'b') where hydrogen peroxide is recited as an activator for any enzymatic oxidation system other than a peroxidase system (see pg. 5-6, specification). H<sub>2</sub>O<sub>2</sub> is not disclosed to act as an activator (see above), nor is it disclosed to act as an activator for an oxygenase system.

Similarly, the specification does not provide support for the recitation of claim 1 (part 'b') or claim 5 where oxygen is recited as an activator for any enzymatic oxidation system other than an oxygenase system (see pg. 5-6, specification). Oxygen is not disclosed to act as an activator for a peroxidase system.

Claims 8 and 15 lack support for the recitation of the enzyme being "selected from the group consisting of a peroxidase, an oxygenases [sic], a polyphenol oxidase and combinations thereof." Original claims 8 and 15 provided for the original recitation of "polyphenol oxidases such as catechol oxidase, tyrosinase or a laccase or a combination thereof"; however, neither the claims nor the specification provided support for the amended phrasing such that "combinations" of "peroxidase, an oxygenases [sic], [and] a polyphenol oxidase" (i.e. all of these general types of enzymes) may be produced. Furthermore, page 10, lines 1-4 of the specification appears to indicate that the enzyme may be

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(a) a peroxidase, (b) oxygenase such as laccase, or (c) “a polyphenol oxidase such as catechol oxidase, tyrosinase, or a combination thereof.” Applicant is required to amend the claims to amend or delete the rejected language. See also the rejection previously made of record under 35 U.S.C. 112, second paragraph with regard to the fact that the previous phrasing of these claims was unclear, and which requested that applicant provide an explanation of any forthcoming amendment, and why such amended language would be supported by the specification. Applicant has not provided support for the claimed combination of enzymes within the enzymatic oxidation system, nor has applicant provided any reasonable guidance or indication that such combinations would be expected to function within the claimed invention.

Claims 8, 9 and 15-16 are rejected for lacking proper support in the original specification for the reasons set forth in the new matter objection to the specification, above.

Claims 9 and 16 lack proper support for the additional claim language limiting the protein to that “in addition to the enzymatic oxidation system.” The specification does not provide direct support for this limitation. In effect, the improperly-added phrase may serve to eliminate the inclusion of the enzymes present in the composition to serve as the recited protein. Enzymes are proteins, and thus the specific exclusion of them from the scope of the originally-disclosed invention and claims, is improper.

ii) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**New Rejections:**

Claims 1-10 and 20 are indefinite, as it is unclear whether an *additional* “more than 15% of the ferulic acid residues” are converted (see part ‘b’ of claim 1), or if the original 15% of the already-oxidized ferulic acid groups (see part ‘a-1’ of claim 1) may be included in the later-recited “more than 15%”. In other words, it is unclear if a total amount of 16% would be acceptable, for example, or if the minimum would total more than 30%.

Claims 1-10 and 20 are indefinite because parts (a) and (b) of claim 1 appear to directly conflict with one another. Part (a) of claim 1 specifically dictates that the “the enzymatic oxidation system in said base composition converts less than 5% of the ferulic acid residues to di-ferulic acid after one week”. However, part (b) of claim 1 then states that the base comprising the enzymatic oxidation system is combined with an activator to “convert more than 15% of the ferulic acid residues on the ferulylated polymer to di-ferulic acid residues within a time interval of 15 minutes.” The recitation of part (b) directly conflicts with that of part (a), which clearly sets forth the fact that part (b) may not be possible. Note that if applicant intends the “activator” to impart a different property to the system, this is not clear from the claims.

Claims 1-10 and 20 are indefinite for the recitation in claim 1 (part ‘a’) of the phrase “placing a base composition and optionally a propellant gas under pressure into a container”. It is unclear if the container must contain the components under pressure, regardless of whether only the base or both the base and propellant gas are present. Contrast this with the recitation of claim 19, which clearly sets forth that only the propellant gas need be under pressure.

Claim 7 is indefinite for the recitation of the phrase “at most 5%”, because it conflicts with claim 1 from which it depends. Claim 1 requires “less than 5% of the ferulic acid residues” to be oxidized (i.e. converted to di-ferulic acid), whereas claim 7 states that “at most 5% of the ferulic acid groups” are oxidized. Claim 1 does not encompass 5% being oxidized, thus excluding the limitation of claim 7.

Claim 14 is indefinite for the reasons set forth immediately above with respect to claim 7.

NOTE: Pages 4 and 9 of the specification appear to provide conflicting end points for the defining range of the oxidized ferulic acid groups within the base. The specific definition provided at page 4 of the specification defines “essentially inactivated” as “less than 5%”, after storage at 1 week at ambient temperature. The recitation of page 9, lines 20-21, states “at most 5%”, which differs from “less than 5%”, but does not indicate at what point this is measured (immediately, or after storage at 1 week at ambient temperature, or under other conditions, etc.).

Claim 7 is indefinite, because it is unclear at what point (at most) 5% of the ferulic acid groups are oxidized and how this is to be accomplished, when part (a-1) states that “at most 15% of the ferulic acid groups are oxidized” and part (b) states that more than 15% are oxidized. Claim 7 does not clearly

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and distinctly point out where and when the limitation is to be present. Similarly, claim 14 is rejected for the reasons set forth with respect to claim 7.

Claim 14: conflicts with claim 11. Claim 11 requires “less than 5% of the ferulic acid residues” to be oxidized (i.e. converted to di-ferulic acid), whereas claim 14 states that “at most 5% of the ferulic acid groups” are oxidized. Claim 11 does not encompass 5% being oxidized.

Claim 21 is indefinite for its dependency upon claim 11. No such enzymes are specifically recited in claim 11. It is believed that claim 21 should depend from claim 15, and will be examined as such. Claim correction is required.

**Rejections maintained:**

In claim 4, the phrase “is of a size suitable to hold an amount of base composition sufficient to prepare one average serving of the frozen aerated confection for an individual consumer” is indefinite for the reasons set forth previously with respect to the phrase “one serving.” The amended phrase still recites relative terms which render the claim indefinite. It appears that these are intended to limit the size of the container and/or the size or amount of the contents therein; however, the terms “size suitable to”, “hold an amount... sufficient to prepare”, and “one average serving... for an individual consumer” are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Furthermore, regarding claim 4, it is unclear as to what amount would be encompassed by “a size suitable to hold an amount” of the substance, which is then somehow intended to be “sufficient to prepare one average serving”, intended for “an individual consumer”.

Claim 18 is indefinite due to the recitation of the phrase “and combinations thereof”. It is believed that the term “and” within this phrase, should be “or”. As it stands, it is unclear as to how the claimed composition may comprise *all* of the recited elements *and* combinations thereof. Furthermore, as previously stated on the record, accepted U.S. patent language should be utilized. A recitation of a selection from a group of elements in a claim should comply with accepted U.S. Patent practice with regard to the recitation of Markush grouping of claim elements. Phrases using “comprising” are open sets, and should recite elements in the alternative (i.e. “comprising A, B, C or D”), whereas closed sets (“consisting of”) should recite elements as “selected from the group consisting of A, B, C and D.”

***Claim Rejections - 35 USC § 102 & 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-18 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sondergaard et al. (WO 00/40098).

The reference and rejection are incorporated as cited in a previous Office action.

Applicant's arguments filed October 05, 2006, have been fully considered but they are not persuasive. Applicant's arguments at pages 13-14 of the response with regard to claims 1-10 and 19-21, specifically regarding the oxidation of the base composition while oxidation is taking place, and more specifically, when the components are stored under pressure, are not deemed persuasive because applicant amended claims 1-10 to recite that the base composition and propellant gas are stored under pressure, and that the combination is aerated to have an overrun, and because applicant's claims did not previously clearly set forth the currently-claimed invention. Claim 19 was not included under this rejection, and thus applicant's arguments with respect to this claim are not deemed persuasive.

Applicant's arguments at pages 12-13 and 14 of the response which pertain to the composition itself, are not deemed persuasive for the reasons of record. At page 12-13 applicant states that "Sondergaard et al discloses a process for preparing a food stuff comprising incorporating in the food stuff a pectin composition wherein the pectin composition comprises at least a population of pectin which is covalently cross linked. Thus, the material (pectin composition) which Sondergaard et al discloses as being incorporated in a food stuff is a pectin which is already cross linked before the food stuff is formed." This is not deemed persuasive for the reasons of record. For example, as previously stated from



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page 6 of the reference, “[t]ypically, the pectin material is contacted with the cross-linking agent, for example a laccase, in the presence of atmospheric air. This will normally suffice to ensure an adequate supply of oxygen for oxidation, although forcible aeration of a reaction mixture with air, or possibly even substantially pure oxygen, may be advantageous under certain conditions.” Thus as previously demonstrated by the reference, the entire contents of the container may be combined with water and/or air, including forcible aeration. Therefore, contrary to applicant’s assertion, the reference does not teach away from cross-linking during gas incorporation.

Further, applicant’s argument contradicts itself by implying that *all* of the pectin “is already cross linked before the food stuff is formed”, while previously stating that the referenced “pectin composition comprises *at least a population of* pectin which is covalently cross linked.” It is noted that applicant’s own claims require that at least a portion of the starting pectin be cross-linked. Thus applicant’s arguments are not deemed persuasive.

### ***Claim Rejections - 35 USC § 103***

Claims 1-10 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sondergaard et al. in view of Weibel (US PAT 5,008,254, of record). The reference and rejection are incorporated as cited in a previous Office action, and are hereby additionally applied to claims 1-10 and 20-21 in light of applicant’s amendments.

Applicant’s arguments filed October 05, 2006, have been fully considered but they are not persuasive.

In response to applicant’s arguments against the references individually, at page 15 of the reply, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The rejection was based upon a combination of references which clearly set forth a proper combination of elements and motivation such that it would have been obvious to one of ordinary skill in the art to have utilized the sugar beet pectin composition of Sondergaard et al. within a container for producing an aerated/whipped-cream-type dairy confection.

Further, applicant’s arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the combination of references.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 remain provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/471,482. Applicant states that a terminal disclaimer would be forthcoming. Currently, the rejection stands for the reasons of record.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Hendricks whose telephone number is (571) 272-1401. The examiner can normally be reached on M-F (8:30am-6pm); First Friday off.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**KEITH HENDRICKS**  
**PRIMARY EXAMINER**